

Metrics:

- Bases in SI unit:
 - meters (m) → length/width/
height/distance
 - kilograms (kg) → mass
 - liters (L) → volume
 - seconds (s) → time
 - Kelvins (K) → temperature
 - moles (mol) → amount
 - Amperes (A) → current
 - candela (cd) → light intensity

• Prefixes, largest to smallest:

- kilo (k) \rightarrow $\underline{1}$ km = 1000 m
- hecto (h) \rightarrow $\underline{1}$ hL = 100 L
- deca (da) \rightarrow $\underline{1}$ dag = 10 g
- BASE
- deci (d) \rightarrow $\underline{1}$ dm = $\frac{1}{10}$ ^(0.1) m
- centi (c) \rightarrow $\underline{1}$ cL = $\frac{1}{100}$ ^(0.01) L
- milli (m) \rightarrow $\underline{1}$ mg = $\frac{1}{1000}$ ^(0.001) g

• Prefixes in order:

kilo hecto deca base deci centi milli

1000 100 10 1 $\frac{1}{10}$ $\frac{1}{100}$ $\frac{1}{1000}$

King Henry died by drinking chocolate milk

- Converting:

1. Figure out where you are starting and ending.

2. Find the decimal and move it in the same direction as step 1.

- If you move right (larger to smaller), move decimal to the right.

- If you move to the left (smaller to larger), you move the decimal to the left.

• Examples:

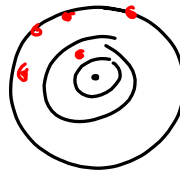
$$\underbrace{.01}_{\text{red}} \text{ m} = \underline{0.01}_{\text{blue}} \text{ hm}$$

$$\underbrace{2.500}_{\text{green}} \text{ kg} = \underline{2500}_{\text{blue}} \text{ g}$$

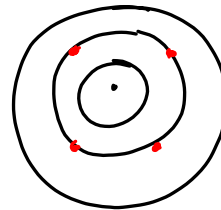
$$\underbrace{17.504}_{\text{red}} \text{ dL} = \underline{0.17504}_{\text{blue}} \text{ da}$$

- Accuracy and Precision:
 - Precision → Measure of the degree to which measurements made in the same way agree with each other
 - Accuracy → Degree to which experimental value agrees with accepted or true value

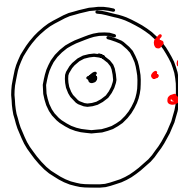
NOT Accurate
NOT Precise



Accurate
NOT Precise



NOT Accurate
Precise



Accurate
Precise

